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CONCLUSION: This qualitative study suggests that domestic cleaners may be at increased risk of exposures that may have potential adverse respiratory health effects.

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REFERENT CONCENTRATIONS OF PCDD/FS AND DIOXIN-LIKE PCBS IN SERA OF PERSONS IN THE U.S. BASED ON THE NEW WHO 2006 TEFS AND 2001–2002 NHANES DATA

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PURPOSE: Reference values for PCDD/Fs and dioxin-like PCBs in serum were recently published based on the WHO_{1998} TEFs and NHANES data. In 2006, the World Health Organization (WHO) revised toxic equivalency factors (TEFs) for a number of congeners. In accordance with these changes, we calculated new reference statistics using the WHO_{2006} TEFs. Additionally, the contribution of individual congeners to the total TCDD TEQ and the effect that the revised TEFs had on total TEQ serum concentrations for the general U.S. population were also determined.
METHODS: All 2,3,7,8-substituted PCDD/F and nine dioxin-like PCB serum concentration data examined in this study are from the 2001–2002 NHANES survey. Total TCDD TEQ for each individual volunteer was calculated by summing the product of each congener's concentration and the associated 2006 WHO TEF. Calculation of reference values and all statistical analyses were conducted using SAS and SUDAAN software.
RESULTS: 2,3,7,8-TCDD, 1,2,3,7,8-PeCDD, 1,2,3,6,7,8-HxCDD, 2,3,4,7,8-PeCDF, and PCB 126 still contributed the greatest percentage to the total TEQ. However, both PCBs 156 and 157 were no longer significant contributors, instead being displaced by 1,2,3,4,7,8-HxCDF and PCB 169. Using the new TEF scheme, TEQ_{17-9} was approximately equal to TEQ_{17-3}. Average total TEQ estimates were 5–12 ppt lower than average estimates calculated using the WHO_{1998} TEFs, and 95th percentile estimates were reduced by 5 to 25 ppt with the largest reductions in total TEQ for older individuals.
CONCLUSION: The updated TEFs had little impact on the percent contribution of the dioxin, furan, and co-planar PCB congeners to the total TEQ. However, the decrease in TEFs for the mono-*ortho* substituted PCBs decreased their contribution to total TEQ appreciably as well as reduced estimates of total TEQ body burden.

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ADIPOSITY AND DEPRESSIVE SYMPTOMS IN POLICE OFFICERS

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PURPOSE: To determine the association between measures of adiposity and depression in a sample of police officers.
METHODS: This study was a cross sectional observational study of 115 police officers stratified by gender and selected at random from an urban police department. Measures of adiposity (Body Mass Index (BMI), abdominal height, and waist circumference) and depressive symptoms (Center for Epidemiological Studies Depression (CES-D) scale) were obtained during a clinic visit. One hundred and three officers (61 men and 42 women) had complete data and linear regression analysis was conducted separately for men and women. Covariate adjustments were made for age, alcohol use, years of police service, smoking, physical activity, fasting serum glucose, and marital status.
RESULTS: We found statistically significant positive associations between the CES-D score and both BMI ($p = 0.005$) and abdominal height ($p = 0.006$) for men. No significant associations were found between CES-D score and adiposity in women ($p = 0.591$ for BMI, $p = 0.81$ for abdominal height, $p = 0.52$ for waist circumference). Adjustment for covariates did not result in any meaningful change in the reported associations.
CONCLUSION: Results indicate a significant positive association between adiposity and depression among male police officers. The temporal sequence and additional physiological and psychological factors that might influence this association should be examined prospectively.

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FACTORS CONTRIBUTING TO BLOOD LEAD LEVELS OF U.S. CHILDREN

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PURPOSE: While elemental lead has been removed from a variety of products over the past 30 years, it is still a widely distributed metal in the environment and can be found in old electronics, children's toys, and ceramics resulting in the exposure of young children. To determine what factors contribute to blood lead levels in children, and therefore, help determine possible exposure routes, we assessed the effect of housing and general demographic factors and determined which characteristics had the greatest influence on lead levels for children.
METHODS: Blood lead levels (BLLs), demographic data, and housing data from the third National Health and Nutrition Examination Survey (NHANES) (1988–1994) and the three continuous NHANES cycles (1999–2000, 2001–2002, 2003–2004) were used in these analyses. Using SAS software, potential correlations between BLLs and various characteristics were determined using simple linear regression while multivariate regression was utilized to assess the significance of several factors while controlling for known predictors of blood lead levels in children 1–5 years of age.
RESULTS: Age of housing, being non-Hispanic black, and age of child had the greatest effect on lead levels in children. Non-Hispanic black children had significantly higher BLLs than non-minority children even after adjusting for age of child and age of housing; however, significant differences in BLLs among the different races were not observed for children living in housing built prior to 1950. More notably, mean ln[BLL] was significantly associated with lead dust levels, which is consistent with the result that children who attend daycare/preschool have significantly lower BLLs than children who do not.